Fig. 1

upper strand

DNA control
25 nM
50 nM
GCTA
100 nM
150 nM

lower strand

DNA control
25 nM
50 nM
GCTA
100 nM
150 nM

site 1

site 2

site 2

5'-AGCGTCGATTTTTGTGATGCTCGTCAG-3'

5'-CTGACGAGCATCACAAAAATCGACGCT-3'
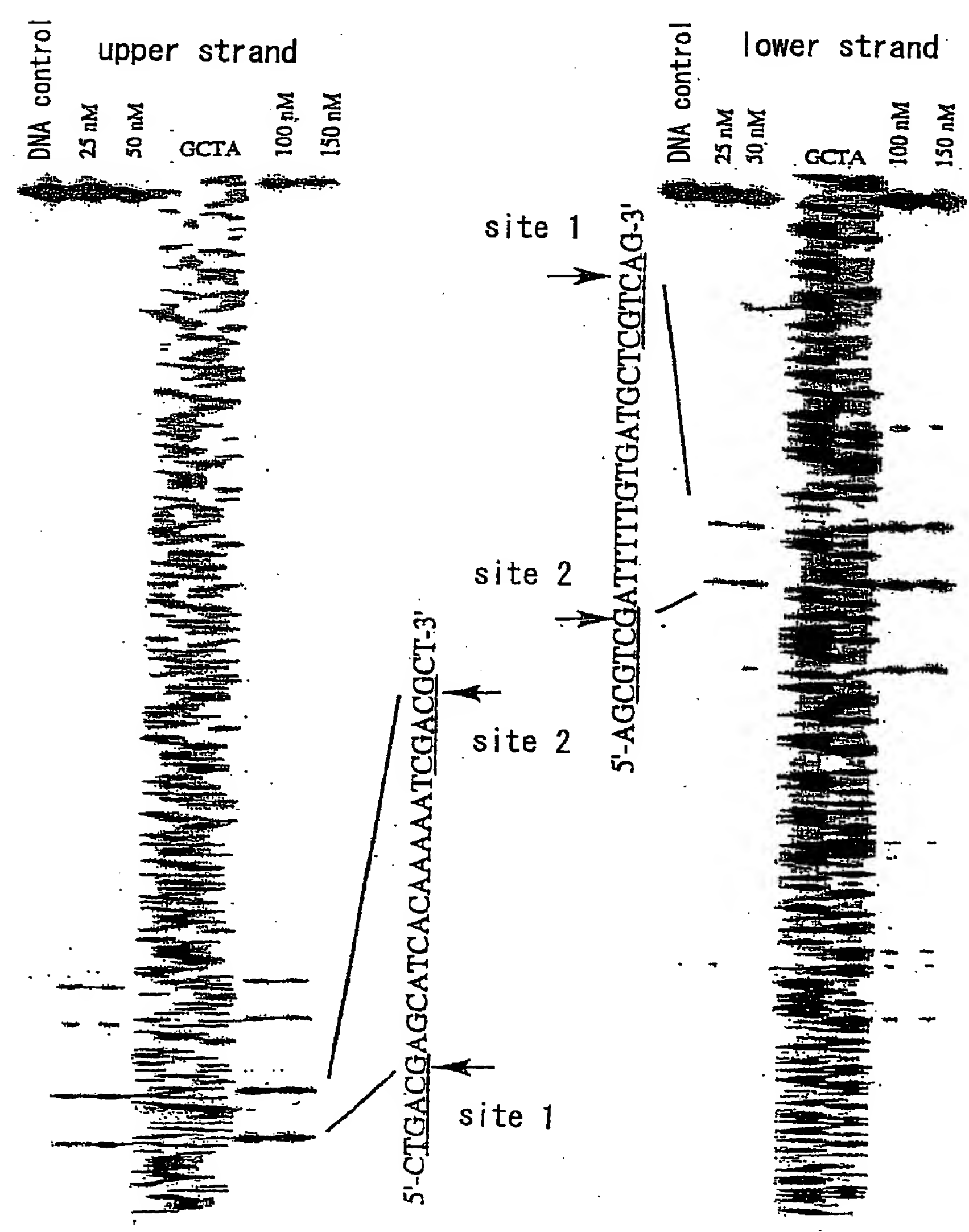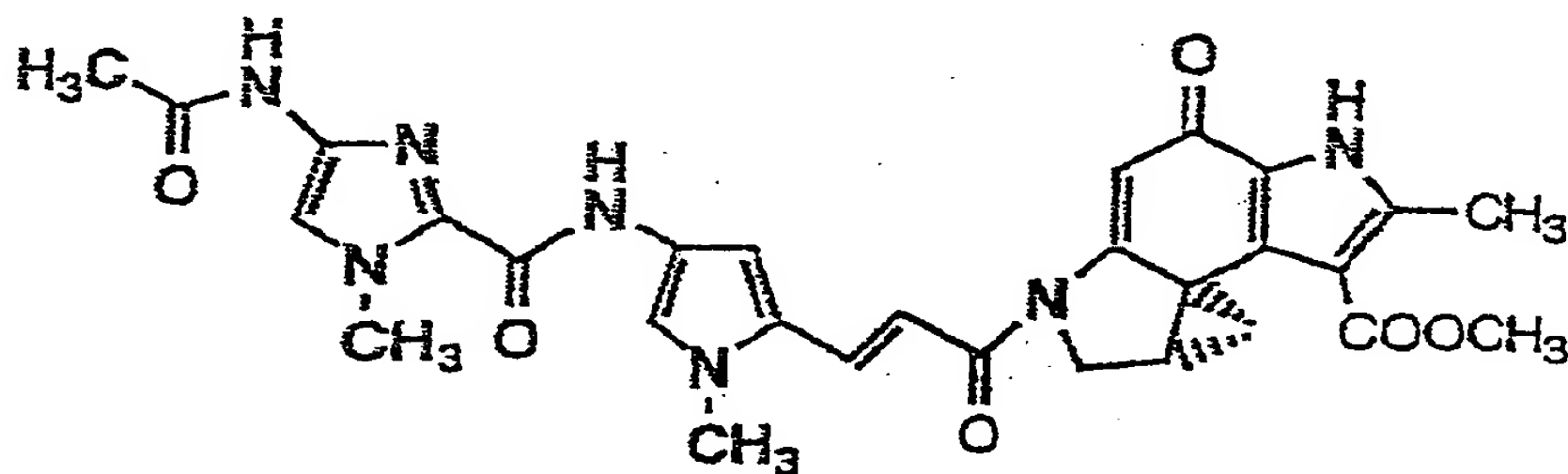
site 1

Fig. 2

5'*- <u>AGAATCAGGG GATAACGCAG</u> GAAAGAACAT GTGAGCAAAA GGCCAGCAAA
3'- TCTTAGTCCC CTATTGCGTC CTTTCTTGTA CACTCGTTTT CCGGTCGTTT

AGGCCAGGAA CCGTAAAAAG GCCGCGTTGC TGGCGTTTTT CCATAGGCTC
TCCGGTCCTT GGCATTTTTC CGGCGCAACG ACCGCAAAAA GGTATCCGAG

      site 1 ↓   site 2 ↓

CGCCCCCC**TG** **ACG**AGCATCA **CAAAAATCGA** **CG**CTCAAGTC AGAGGTGGCG
GCGGGGGG**AC** **TGC**TCGTAGT GTTTTTAGCT GCGAGTTCAG TCTCCACCGC

       ↑   ↑

AAACCCGACA GGACTATAAA GATACCAGGC GTTTCCCCCT GGAAGCTCCC
TTTGGGCTGT CCTGATATTT CTATGGTCCG CAAAGGGGGA CCTTCGAGGG

TCGTGCGCTC TCCTGTTCCG ACCCTGCCGC TTACCGGATA CCTGTCCGCC
AGCACGCGAG AGGACAAGGC TGGGACGGCG AATGGCCTAT GGACAGGCGG

TTTCTCCCTT CGGGAAGCGT GGCGCTTTCT CAATGCTCAC GCTGTAGGTA
AAAGAGGGAA GCCCTTAGCA CCGCGAAAGA GTTACGAGTG CGACATCCAT

TCTCAGTTCG GTGTAGGTCG TTCGCTCCAA GCTGGGCTGT GTGCACGAAC
AGAGTCAAGC CACATCCAGC AAGCGAGGTT CGACCCGACA CACGTGCTTG

CCCCCGTTCA GCCCGACCGC TGCGCCTTAT CCGGTAACTA TCGTCTTGAG
GGGGGCAAGT CGGGCTGGCG ACGCGGAATA GGCCATTGAT AGCAGAACTC

TCCAACCCGG TAAGACACGA CTTATCGCCA CTGGCAGCAG CCACTGGTAA-3'
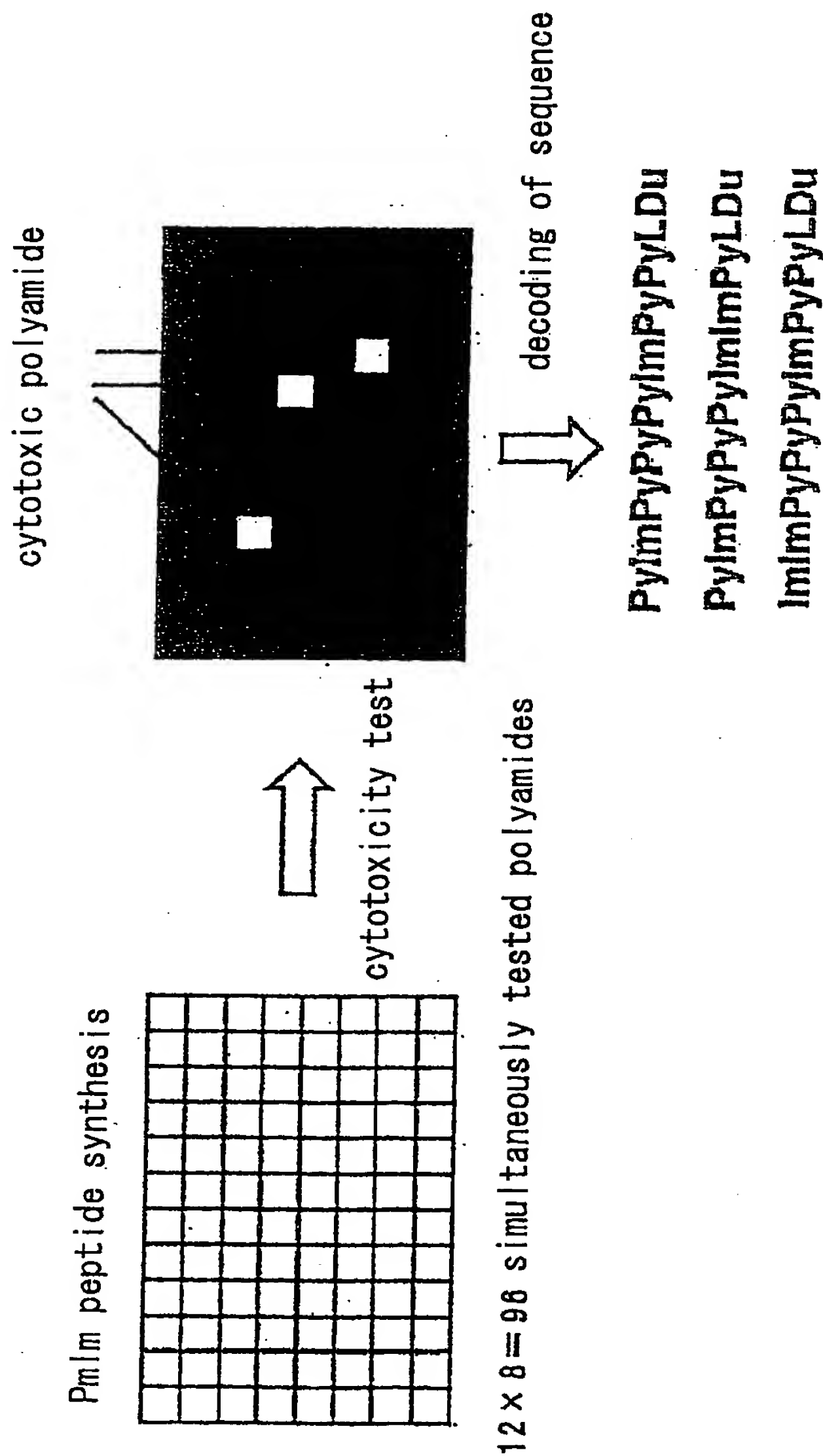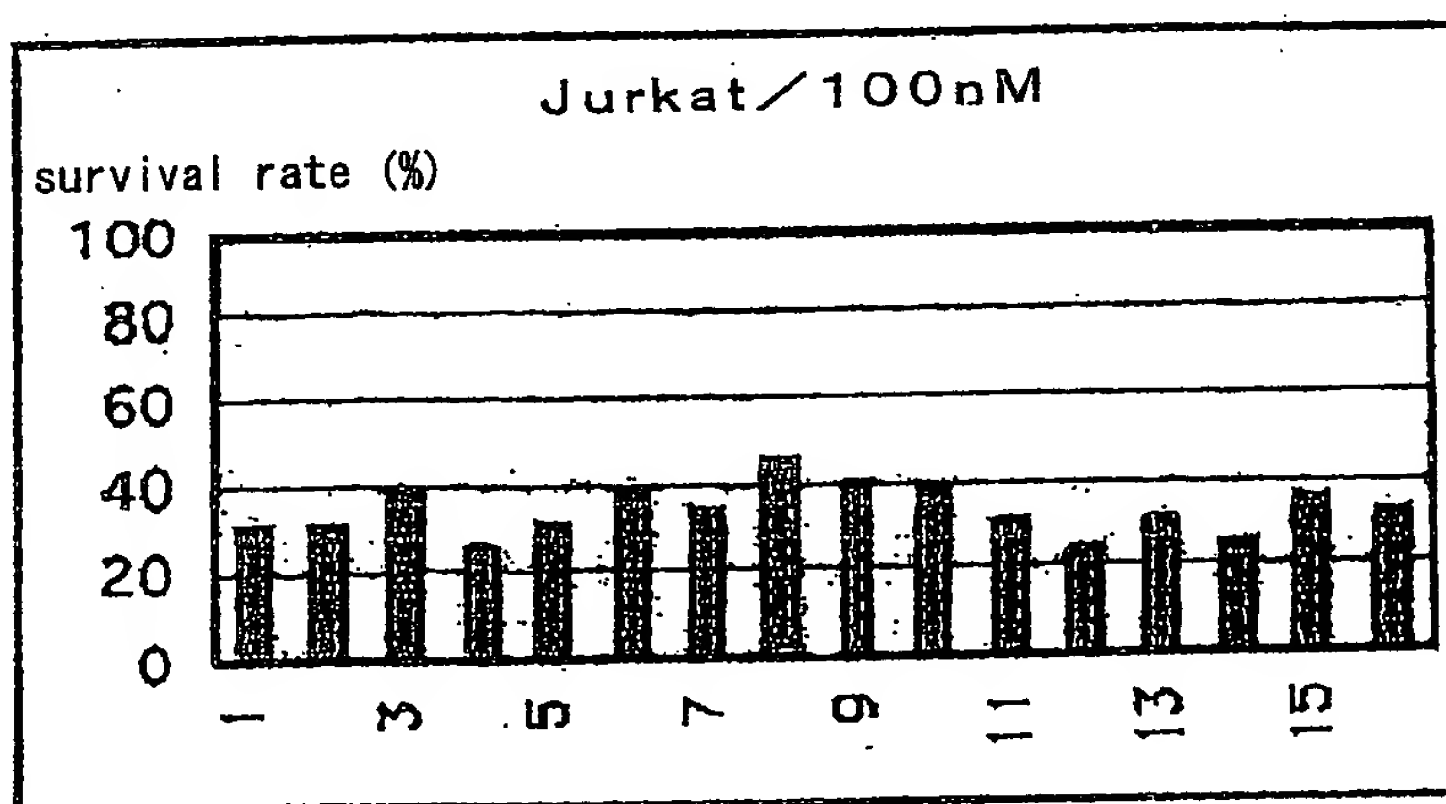AGGTTGGGCC ATTCTGTGCT GAATAGCGGT <u>GACCGTCGTC GGTGACCATT</u>-5'*

Fig. 3

PmIm peptide synthesis
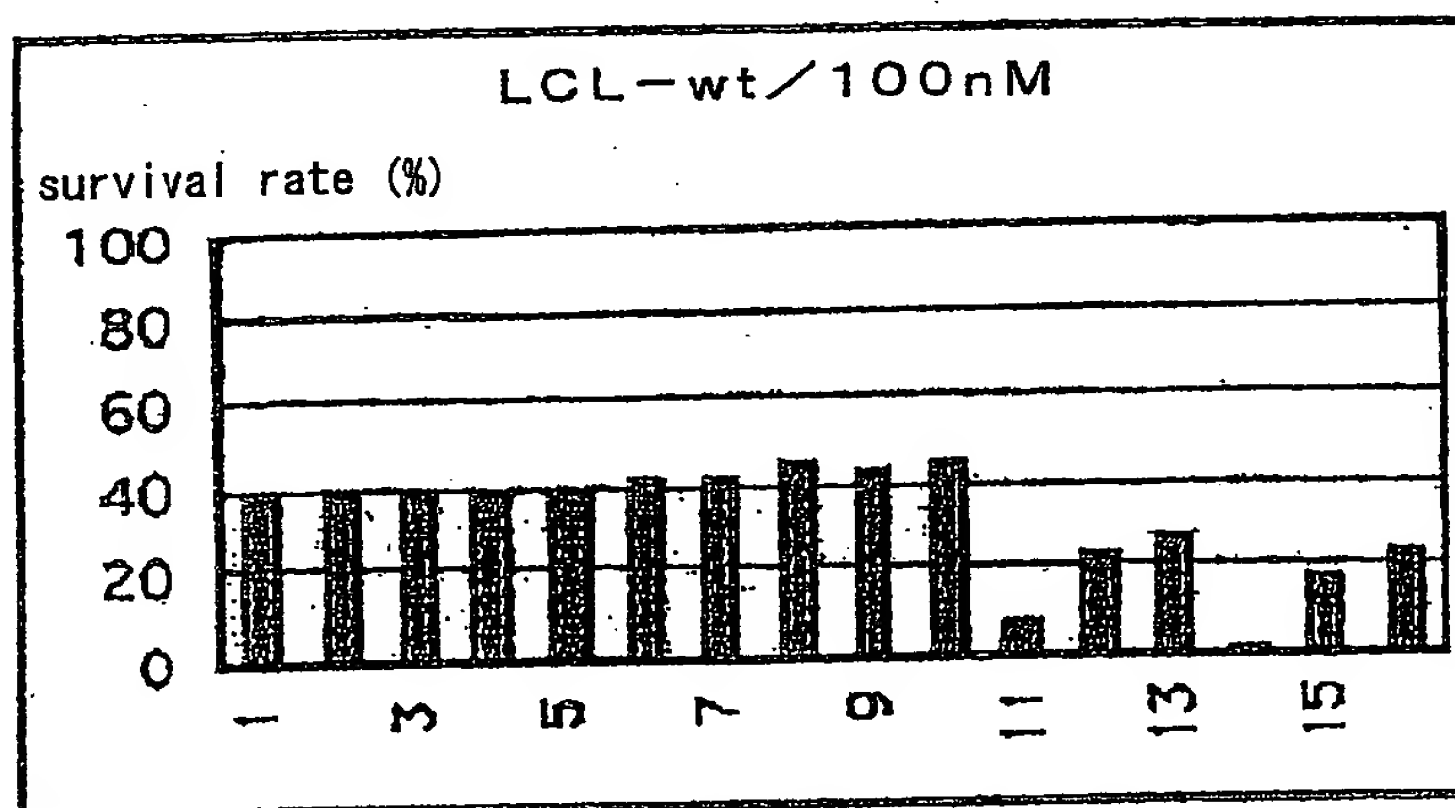
cytotoxicity test

12 × 8 = 96 simultaneously tested polyamides

cytotoxic polyamide

decoding of sequence

PyImPyPyPyImPyPyLDu
PyImPyPyPyImImPyLDu
ImImPyPyPyImPyPyLDu

Fig. 4

LCL−wt／100nM

survival rate (%)

Jurkat／100nM

survival rate (%)

Fig. 5

cytotoxic polyamide

decoding of sequence

3: PyFyIm
2-6: PyImPy / Im-Py-Im (1:1)
4-8: PyImPy / ImImIm (1:1)

cytotoxicity test

8 polyamides

XXXX = PyPyPy 1
PyImPy 2
PyPyIm 3
PyImPy 4
PyImIm 5
ImPyIm 6
ImImPy 7
ImImIm 8